

## **List of High-Yield Questions for Level II**

We have identified the most important practice problems from the curriculum that you must do.

Ideally you should do all practice problems, but if you are time constrained you should at least do the questions on this list.

As part of your final revision review these questions again to reinforce key concepts.

Note: In the table below PP refers to the Practice Problem which you will find at the end of each reading in the curriculum.

In some cases curiculum examples are referred to and in some cases the IFT Q-bank is referred to.

For more Information visit www.ift.world

## **Topic** Quantative Methods

IFT strongly recommends that you do all the practice problems in the curriculum, but if you are severely time constrained do at least the following.

Reading	Question #	Concept Tested
	PP1	Fintech
	PP2	Big data
	PP3	Machine learning
	PP4	Text analytics
Fintech	PP5	Robo- advisory services
	PP6	Risk analysis
	PP7	Algorithmic trading
	PP8	DLT
	PP9	DLT
	PP5 - PP10	
	PP5	Coefficient of determination = R-squared
	PP6	Effect of deleting observations on R-Squared and SEE
	PP7	Correlation coefficient = Multiple R
	PP8	F - Stat formula
	PP9	Predicting independent variable using regression equation
	PP10	Interpreting p-values
	PP11 - PP16	Interpreting p values
	PP11	Testing the significance of the correlation coefficient
	PP12	Time series vs cross sectional data
	PP13	Predicting independent variable using regression equation
	PP14	Interpreting R-squared
Correlation and Regression	PP15	
Correlation and Regression	PP16	Interpreting SEE
	PP17 - PP26	Interpreting t-stats
	PP17 - PP26 PP17	Scatter plots
	PP18	Calculating sample covariance
	PP19	
	PP20	Calculating sample correlation
		Interpreting regression results
	PP21	Dependent vs independent variable
	PP22	Degrees of freedom
	PP23	Calculating confidence intervals
	PP24	Interpreting t-stats
	PP25	Predicting independent variable using regression equation
	PP26	Calculating F-stat
	PP17 - PP22	
	PP17	Predicting independent variable using regression equation
	PP18	Confidence interval for the regression coefficient
	PP19	Testing the significance of the correlation coefficient
	PP20	Interpreting multiple R-squared
	PP21	Problems in regression analysis - Heteroskedasticity
	PP22	Model misspecification issues - omitted variable
	PP29 - PP36	
	PP29	Calculating F-statistic
	PP30	Qualitative independent variables - interpreting coefficients
	PP31	Problems in regression analysis - multicollinearity
	PP32	Qualitative independent variables - setting up the model

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	PP33	Problems in regression analysis - Heteroskedasticity
	PP34	Effects of positive serial correlation
	PP35	Durbin–Watson statistic
Multiple Regression and Machine	PP36	Qualitative dependent variables - when to use probit and logit models
Learning	PP37 - PP45	
	PP37	Testing the significance of the correlation coefficient
	PP38	Interpreting p-values
	PP39	Interpreting p-values
	PP40	Predicting independent variable using regression equation
	PP41	R-squared and adjusted R-squared
	PP42	Interpreting F-stat
	PP43	Interpreting F-stat
	PP44	Assumptions of multiple regression
	PP45	Adjusted R-squared
	Example 17	Major types of machine learning
	1	Classification problem vs regression problem
	2	Penalized regression
	3	CART
	4	Neural networks
	5	Clustering
	6	Dimension reduction
	PP20 - PP26	
	PP20	Forecasting using a linear trend model
	PP21	Forecasting using a log linear trend model
	PP22	Interpreting the Durbin–Watson statistic
	PP23	Covariance stationary time series
	PP24	Forecasting using the chain rule
	PP25	Interpreting autocorrelations in an AR model
	PP26	Mean-reverting level
	PP27 - PP35	integri-reverting level
Time-Series Analysis		Properties of random walk & covariance stationary time series
	PP28	Covariance stationary time series
	PP29	Unit root
	PP30	Dickey–Fuller test
	PP31	Interpreting autocorrelations in an AR model
	PP32	Forecasting using a first differenced model
	PP33	ARCH
	PP34	Working with two time series
	PP35	Selecting an appropriate time series model
	Online assessment - Jason Ya	, ~
Simulations	Q1	To compare scenario analysis with simulations
	Q2	To define prob distribution for the variables
	Q3	How to treat correlation across variables?
	Q4	To define the probability distribution for the simulation variables
	Q5	To explain the results of a simulation
	Q6	What are the issues in simulation?



**Topic** Economics

## IFT strongly recommends that you do all the practice problems in the curriculum, but if you are severely time constrained do at least the following.

Reading	Question #	Concept Tested
	PP6 - PP12	
	PP6	Uncovered interest rate parity
	PP7	Flow supply/demand channel
	PP8	Portfolio balance approach
	PP9	Mundell-Fleming model
	PP10	Portfolio- balance approach
	PP11	Capital control and central bank intervention
Common South and a Ration	PP12	Warning signs of a currency crisis
Currency Exchange Rates:	PP13 - PP20	
Determination and Forecasting	PP13	Bid-offer spread
	PP14	Factors affecting bid-offer spread
	PP15	Triangular arbitrage profit
	PP16	Forward contract - mark to market
	PP17	Covered interest rate parity interpretation
	PP18	Calculating forward points using covered interest rate parity
	PP19	International parity conditions
	PP20	International parity conditions
	PP7 - PP15	
	PP7	Factors favoring and limiting economic growth
	PP8	Capital deepening investment and technological progress
	PP9	Sustainable growth rate of the economy
Economic Growth and the	PP10	Potential GDP
Investment Decision	PP11	Capital deepening investment and technological progress
	PP12	Demographic factors
	PP13	Natural resources
	PP14	Demographics, immigration, and labor force participation
	PP15	Convergence hypotheses
	PP7 - PP13	
	PP7	Classification of regulators
	PP8	SRO
Economics of Regulation	PP9	'Unintended' implementation cost
	PP10	Regulatory tools
	PP11	Regulatory competition
	PP12	Regulation of commerce
	PP13	Regulatory tools



## **Topic** Alternative Investments

IFT strongly recommends that you do all the practice problems in the curriculum, but if you are severely time constrained do at least the following.

Reading	Question #	Concept Tested
	PP1 - PP12	
	PP1	Interpreting NOI
Private Real Estate Investments	PP2	Real estate valuation - misc items
	PP3	Calculating growth rate
	PP4	Discounted cash flow method
	PP5	Direct capitalization method
	PP6	Sales comparison approach
	PP7	Due diligence
	PP8	All cash purchase v/s used of debt
	PP9	Calculating maximum loan amount
	PP10	Benefits of private equity real estate investments
	PP11	Sources of risk for real estate investments
	PP12	Real estate investment: Basic forms
	PP1 - PP6	Real estate investment. Basic forms
	PP1	REITs v/s REOCs
	PP2	
	PP3	Net asset value approach
		Relative valuation using property subsector average P/FFO multiple
D. I. P. J. J. D. J. F. J. J.	PP4	Discounted cash flow valuation using a two- step dividend model
	PP5	Relative valuation using property subsector average P/AFFO multiple
Publicly Traded Real Estate	PP6	Principal risk factors for REITs
Securities	PP7 - PP12	
	PP7	Investment characteristics of REITs
	PP8	Disadvantages of REITs
	PP9	Economic value determinants for different types of REITs
	PP10	Adjusted funds from operations (AFFO)
	PP11	Relative value approach - P/FFO multiple
	PP12	Discounted cash flow approach - 2 step model
	PP7 - PP12	
	PP7	Valuation characteristics of buyout vs. venture capital investments
	PP8	Alignment of interests
	PP9	Evaluating fund performance
	PP10	Evaluating fund performance
	PP11	Exit routes
Private Equity Valuation	PP12	Valuation issues in buyout and venture capital transactions
Trivate Equity Valuation	PP13 - PP18	
	PP13	Valuation characteristics of buyout vs. venture capital investments
	PP14	Value creation in buyout firms
	PP15	Distribution waterfall
	PP16	Calculating total value to paid- in capital (TVPI)
	PP17	Calculating carried interest
	PP18	Evaluating fund performance
Commodity and Commodity Derivatives: An Introduction	PP1 - PP8	
	PP1	Commodity futures market participants
	PP2	Characteristics of commodity sectors
	PP3	Valuation of commodities
	PP4	Backwardation
	PP5	Theories explaining futures returns
	PP6	Roll returns
	PP7	Calculating total return
	PP8	Total return swap